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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Steffen Bornemann

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EXAMINER

HAMMER, KATIE L

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/538,024	BORNEMANN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	KATIE HAMMER	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. This Office Action is in response to Applicant's Amendments filed on December 11, 2009. Claims 1-9, 11-12, and 14 are pending in this application. Claims 10 and 13 have been cancelled.

The objections to the drawings are withdrawn in view of Applicant's arguments.

Claims 1-9, 11-12, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Dzen et al. (US 6,008,145) in view of Kinn et al. (US 2001/0008965 A1) for the reasons set forth in the previous office action and reprinted below.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9, 11-12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dzen et al. (US 6,008,145), in view of Kinn et al. (US 2001/0008965 A1).

As to claim 1, Dzen et al. (US '145) teaches hydrophilic polyolefin materials (composition for the permanent hydrophilization of polyolefin fibers and filaments, see col. 2, lines 19-23) made from a mixture of at least one polyolefin and at least one additive containing a fatty acid ester of the general formula  $R-CO-O-CH_2-CH_2-O-R'$ , where R is a straight-chain or branched-chain alkyl residue, and where  $R'=H$ ,  $-CH_3$ ,  $-C_2H_5$ ,  $-C_3H_7$ ,  $-C_4H_9$  (non-ionic surfactant, component A of the composition of the invention is

Art Unit: 1796

alkoxylated C<sub>8</sub>-C<sub>18</sub> fatty acid ester, see col. 3, lines 44-52; Example 1 teaches a fatty acid polyethylene glycol ester methyl ether as the non-ionic surfactant), wherein the polyolefin materials include a subsequent activation of the fatty acid ester on the surface of the polyolefin material by applying a surface active substance in the form of a formulation which contains a silicone compound (one cationically modified polydimethyl siloxane, see col. 2, lines 47-64) and a quaternary ammonium compound (at least one quaternary ammonium compound, see col. 2, lines 25-37).

Dzen et al. (US '145) teaches hydrophilic polyolefin materials as described above, however fails to teach or disclose that the fatty acid ester is a melt additive or that the R is an alkyl residue with 23 to 35 carbon atoms.

As to the number of carbon atoms in the alkyl residue, it is noted that structurally similar compounds are generally expected to have similar properties. The 18 carbon atoms in the fatty acid ester taught by Dzen et al. are structurally similar to the 23 carbon atoms instantly claimed. In re Gvurik, 596 F. 2d 1012, 201 USPQ 552. Closely related homologues, analogs and isomers in chemistry may create a prima facie case of obviousness. In re *Dillon* USPQ 2d 1 897, 1904 (Fed. Cir. 1990); In re *Payne* 203 USPQ 245 (CCPA 1979); In re *Mills* 126 USPQ 5 13 (CCPA 1960); In re *Henze* 85 USPQ 261 (CCPA 1950); In re *Hass* 60 USPQ 544 (CCPA 1944). Burden is shifted to the Applicant to provide evidence teaching that the particular number of carbon atoms produces a new and unexpected result which is different in kind and not merely in degree from the teachings of the prior art.

As to the melt additive limitation, Kinn et al. (US '965) teaches a polyolefin nonwoven web which has durable hydrophilic properties that is formed by a blend of a hydrophobic polyolefin and a hydrophilic melt additive (see para. 0010-0011) where a suitable class of melt additives are monomer and dimer fatty acids having a carbon chain length in the range of 6 to 50, preferably 18 to 36 (see para. 0013-0016).

Therefore, in view of the teaching of Kinn et al., one having ordinary skill in the art at the time the invention was made would be motivated to modify the hydrophilic polyolefin materials taught by Dzen et al. by adding the fatty acid ester as a melt additive taught by Kinn et al. to arrive at the claimed invention because Dzen et al. teaches that the fatty acid ester is a non-ionic surfactant and therefore is in liquid form (see Examples 1-4) and Kinn et al. teaches that it is known in the art of synthesizing hydrophilic polyolefin fibers to add hydrophilic melt additives (see para. 0011). Kinn et al. clearly teaches the use of melt additives, and, thus, a person of ordinary skill in the art would be motivated to arrive at the instantly claimed hydrophilic polyolefin materials with a reasonable expectation of success, and would expect such a composition to have similar properties to those claimed, absent unexpected results.

As to claims 2-6, Dzen et al. teaches the polyolefin material wherein the silicon compound is cationically modified (one cationically modified polydimethyl siloxane, see col. 2, lines 47-64 and col. 3, lines 33-43); polyolefin material wherein the quaternary ammonium compound is a quaternized ester of fatty acids and triethanol amine (see col. 2, lines 25-48); the polyolefin material wherein the formulation for the subsequent activation of the used fatty acid ester on a fiber surface is an aqueous preparation

Art Unit: 1796

(composition present in the form of an aqueous dispersion or emulsion, see col. 3, lines 63-67); the polyolefin material wherein the formulation for the subsequent activation of the used fatty acid ester on a fiber surface is set on the surface physically (preferred if the fiber fleeces finished according to the invention are physically strengthened, see col. 4, lines 48-51); polyolefin material which contains 0.01 to 0.5% by weight of the formulation for activating the used fatty acid ester on a fiber surface (composition applied in the form of an aqueous emulsion or dispersion to the fibers, filaments, or nonwovens in a quantity of from 0.2 to 2%, see col. 4, lines 27-31).

As to claims 7-9 and 11-12, Dzen et al. teaches fibers produced from a polyolefin material (see col. 4, lines 22-26); filaments produced from a polyolefin material (see col. 4, lines 22-26); a nonwoven produced from a polyolefin material (see col. 4, lines 22-26); the nonwoven wherein it has repeated strike-through time measurements according to the EDANA test method ERT 154.0.00 of smaller than 5 seconds (see col. 4, lines 22-26; it is noted that since the chemical composition is the same, it would be obvious to one of skill in the art that the nonwoven material that results would have similar test results); the nonwoven wherein it has in the determination of a repeated runoff according to the EDANA test method ERT 152.0-99, a repeated runoff of less than 25% by weight of the test fluid based on an applied quantity of fluid (see col. 4, lines 22-26; it is noted that since the chemical composition is the same, it would be obvious to one of skill in the art that the nonwoven material that results would have similar test results).

As to claim 14, Dzen et al. teaches a method of producing hydrophilic polyolefin materials (components thoroughly mixed, diluted to an aqueous dispersion, and used as

Art Unit: 1796

a spinning preparation for the permanent hydrophilic finishing of three polypropylene substrates, see Examples 1-4) which consist of at least one polyolefin and an additive containing a fatty acid ester (non-ionic surfactant is alkoxylated C<sub>8</sub>-C<sub>18</sub> fatty acid esters, see col. 3, lines 44-53), wherein the polyolefin materials include a subsequent activation of the fatty acid ester contained in the additive on the fiber surface by applying a surface-active substance in the form of a formulation (composition applied in the form of an aqueous emulsion or dispersion to the fibers, filaments, or nonwovens, see col. 4, lines 27-31), which contains a silicone compound (see col. 3, lines 33-43) and a quaternary ammonium compound (see col. 3, lines 53-56).

### ***Response to Arguments***

3. Applicant's arguments filed on December 11, 2009 have been fully considered but they are not persuasive.

The Applicant argues that Dzen cannot be modified or combined with Kinn to arrive at the claimed invention. However, Dzen teaches that the alkoxylated C<sub>8</sub> to C<sub>18</sub> fatty acid esters are **preferred** compounds, which means they are not limited to only the listed fatty acid esters. Dzen and Kinn are used for the same utility, rendering fibers hydrophilic, and therefore one of ordinary skill in the art could simply substitute the melt additive compound taught by Kinn into the composition taught by Dzen. The Applicant further argues that Dzen teaches that the small chain length of the fatty acid is vitally important, but provides no citation in Dzen to where this is taught/suggested. It is also noted that the phrase "melt additive" is not limiting when the chemical structure is met,

Art Unit: 1796

as claim 1 is a **composition** claim and not a process claim. Furthermore, the Applicant only provides conclusory statements about the difference in alkyl chain length not supported by factual or experimental evidence, see *In re Lindner*, 457 F.2d 506, 173 USPQ 356 (CCPA 1972).

The Applicant again argues that Dzen cannot be modified with the teachings of Kinn as suggested by the Examiner because it would render the composition of Dzen unsatisfactory for its intended purpose. However, the composition of Dzen is used to provide satisfactory permanent hydrophilating properties to treated or finished polyolefin fibers, filaments, and non-woven textile articles (see col. 2, lines 13-22) and Kinn is also used to provide a polyolefin nonwoven web which has durable hydrophilic properties (see para. 0010-0011), thereby the same utility. Furthermore, Kinn is simply referenced to provide evidence that fatty acid esters with a carbon chain length in the range of 18 to 36 (see para. 0016) are known to one of ordinary skill in the art as melt additives for use in hydrophilic polyolefin materials.

The Applicant further argues that the present invention provides surprising results, but again only provides conclusory statements that are not supported by factual or experimental evidence, see *In re Lindner*, 457 F.2d 506, 173 USPQ 356 (CCPA 1972). Additionally, the tenside concentration described is not claimed in instant claim 1, and therefore lacks relevance to its patentability. Accordingly, the rejections are maintained.



***Conclusion***

**4. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATIE HAMMER whose telephone number is (571)270-7342. The examiner can normally be reached on Monday to Friday, 10:00am EST to 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harold Y Pyon/  
Supervisory Patent Examiner, Art  
Unit 1796

/KLH/